

CLAIMS

1. A DNA or RNA localized in the cytoplasm having the 3'-terminus or 5'-terminus chemically modified with a group represented by the formula
-PO(OH)-O-CH₂CH₂OCH₂CH₂NH-CO-peptide or
-O-CO-NH-CH₂CH₂NHCONH(CH₂)₆NH-CO-NH-peptide.
2. A DNA or RNA localized in the cytoplasm modified with a peptide that is a signal peptide selected from HIV-1 Rev (SEQ ID NO: 1 in Sequence Listing), PKI α (SEQ ID NO: 2 in Sequence Listing), MAPKK (SEQ ID NO: 3 in Sequence Listing), and Dsk-1 (SEQ ID NO: 4 in Sequence Listing), or a membrane fusion peptide selected from an HIV-1 tat C-terminal membrane fusion peptide (SEQ ID NO: 5 in Sequence Listing), a gp-41 membrane fusion peptide (SEQ ID NO: 6 in Sequence Listing), an artificially designed amphipathic α -helical peptide (SEQ ID NO: 7 in Sequence Listing), and an artificially designed amphipathic β -sheet peptide (SEQ ID NO: 8, 14, or 15 in Sequence Listing).
3. The DNA localized in the cytoplasm according to claim 1 or 2, wherein the DNA is an oligo DNA that exhibits a genetic medicinal activity.
4. The RNA localized in the cytoplasm according to claim 1 or 2, wherein the RNA is an oligo RNA that exhibits a genetic medicinal activity.
5. A telomerase inhibitor comprising a DNA or RNA localized in the cytoplasm according to any one of claims 1 to 4 as an active ingredient.
6. A tyrosine kinase inhibitor comprising a DNA or RNA localized in the cytoplasm according to any one of claims 1 to 4 as an active ingredient.
7. A therapeutic agent for leukemia comprising a DNA or RNA localized in the cytoplasm according to any one of claims 1 to 4 as an active ingredient.
8. A cell growth inhibitor comprising a DNA or RNA localized in the cytoplasm according to any one of claims 1 to 4 as an active ingredient.
9. A siRNA localized in the cytoplasm characterized in that a chemical modification group is introduced into the 5'-terminus of at least one of the sense strand and the antisense strand constituting the double-strand or a dangling end of the antisense strand, or both.
10. A siRNA localized in the cytoplasm characterized in that at least one of the sense strand and the antisense strand contains a chemical modification group at a non-terminal position.
11. The siRNA localized in the cytoplasm according to claim 9 or 10, wherein the chemical modification group has a polyamine molecule bonded thereto.

12. The siRNA localized in the cytoplasm according to claim 9 or 10, wherein the chemical modification group is a nuclear export signal peptide or membrane fusion peptide introduced via a bifunctional linker.
13. The siRNA localized in the cytoplasm according to claim 12, wherein the bifunctional linker is a residue of a divalent chemical modification group.